

April 4th, 2022
Zoom Meeting
2:00 P.M. - 3:00 P.M.

Prof. Max Reppen
(Boston University)

Discrete dividend payments in continuous time

Abstract: We propose a model in which firm dividend payments occur at regular, deterministic intervals in an otherwise continuous model. This contrasts traditional models where either the payment of continuous dividends is controlled or the dynamics are given by discrete time processes. Moreover, between two dividend payments, the structure allows for other types of control; we consider the possibility of equity issuance at any point in time. The value is characterized by a fixed point structure and as a solution to an impulse Hamilton-Jacobi-Bellman equation with periodic initial and terminal conditions, for which we prove the value function to be a classical solution. We also prove the convergence of an efficient numerical algorithm that we use to study the problem. The model enables us to find the loss caused by infrequent dividend payments. We show that under realistic parameter values this loss varies from around 1% to 24% depending on the state of the system, and that using the optimal policy from the continuous problem further increases the loss.

Zoom link:

Topic: USC Math Finance Colloquium
Time: Apr 4, 2022 02:00 PM Pacific Time (US and Canada)

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